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M U D P I E no. 19

Museum and University Data, Program and Information Exchange

A GUIDE TO COMMERCIAL TIME-SHARING COMPUTING

Time-Sharing Enterprises, Inc., 3401 Market Street, Philadelphia PA 19104, has just published a "Time-Sharing Phone Book," which lists all the known commercial contractors offering time-sharing services in the United States. The list is impressive, but even more so is the present coverage and availability of time-sharing. The only state in the union with no facilities is Alaska. The introduction states, "Today, there is not a telephone in the continental United States which cannot access at least seven time-sharing companies without a toll charge...This book lists 55 companies which may be reached from New York City without long distance charges...18 are listed for Jackson, Mississippi...11 for Casper, Wyoming...and 35 for the San Francisco Bay Area." There are now 1000 local data dial-up points in the U.S. Several companies have covered the contiguous states with IN-WATS servicing, so that anyone anywhere can access the computer. A brief list of those installations which are available from anywhere in the nation follows below. Please look the list over, and if you are a subscriber to any one of them, write to MUDPIE with details about the kind of service, storage, etc., you have. It seems possible that several of us with mutual interests in the potential of sharing programs, data and information could get a network off the ground simply by immediately contracting with a mutually acceptable contractor. Let us at least see if there is sufficient interest to respond to this potential at this time.

If you are not currently contracting for time sharing services and would like information about phone numbers in your area, the book is available for $10.00 at the address given above. If any of you simply want preliminary information about what is possible in your area, I would be glad to check it out in my copy and give you a starting point, at least.--JAP.

Services are offered throughout the contiguous United States by:

Computer Complex, Inc., 6400 Southwest Freeway, Suite 150, Houston, TX 77036.

Concap Computing Systems, 303 Hegenberger Road, Oakland, CA 94621.

General Electric Company, Computer Service Division, 7735 Old Georgetown Rd., Bethesda, MD 20014.

Megasystems, Inc., 460 12th Ave., New York, N Y 10018.

SCI-TEK, Inc., 1707 Gilpin Ave., Wilmington, DE 19800.

Tymshare, Inc., 525 University Ave., Palo Alto, CA 94301.

SMITHSONIAN
AUG 23 1971
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ICSEB-BOULDER 1973

You will find a postcard enclosed with this MUDPIE, which is the preliminary announcement of the First International Congress of Systematic and Evolutionary Biology, to be held in Boulder, Colorado August 4-11, 1973. I hope any of you interested will return the postcard so further information can be sent to you.

You will note that the ninth symposium listed is called "Computer Revolution in Systematics" (I refuse to spell it 'computor'). I have agreed to serve as organizer for this symposium, and I would like to enlist the cooperation of MUDPIE readers in the construction of the program. I have allready indicated to the steering committee that the symposium will not repeat not be concerned with numerical taxonomy. If the numerical taxonomists are interested in the organization of a session on the program, it will have to fall into a separately organized period. I am convinced that the next two years will see a continued development and acceleration of the use of the computer by systematists in general, so the Congress provides an excellent opportunity for presentation of a broad spectrum of demonstrated utility to a large group of systematists receptive to computer potential.

There has been no schedule announced as yet concerning the submission of a program and speakers for the symposium, so there is still plenty of time for planning and organization. I am thinking at present of topics such as the following: potentialities of an inter-museum and university taxonomic network; development of taxonomic matrices for storage of descriptive data; program packages for the output of information such as keys, descriptions, and so on from matrices; storage and retrieval of catalogue data, bibliographic information, synonymies and phylogenies; mutual access to data banks; automation of standard museum procedures such as loans, exchanges, and other record-keeping chores. I am wide open for suggestions on other topics of similar nature, or for suggestions of names of qualified symposium participants. The objectives of the symposium are so close to the purposes of MUDPIE that I was tempted to call this the second MUDPIE conference, but I am afraid the steering committee of ICSEB might object!--James A. Peters.

DATA PROCESSING IN NATURAL HISTORY

A bibliography of seven mimeographed pages under the above title is available from the Natural History Division, Provincial Museum and Archives of Alberta, 12845 102nd Avenue, Edmonton, Alberta, Canada, as "reference list no. 75." It appeared in May, 1970. The material is classified under the following major headings: Principles; Problems; Bibliography; Biology and Ecology; Botany, Herbaria, Botanical Gardens; Geology; Museums; Paleontology; Taxonomy; and Zoology.--JAP.

SURVEY OF COMPUTER PROGRAM CATALOGS-I

"COMPUTER PROGRAMS IN OCEANOGRAPHY"

(Editor's note--This is the first of a series of notes concerning catalogs of computer programs which are available currently. If you are aware of or are responsible for a catalog that should be mentioned in this series, I would appreciate further information. Special thanks are due to Daniel Cohen, of the Systematics Laboratory, NOAA, who has made several such catalogs available to me. --JAP)

The National Oceanographic Data Center issues a listing of computer programs of interest to oceanographers, compiling the list from information contributed by individuals or institutions. Each entry is composed of an abstract summarizing what the program can do; the language in which it is written; the computer on which it runs; and the address of the individual from whom the program can be obtained. The material was compiled by C. Dinger, of NODC. It is arranged under subject headings, with the major headings as follows: Biological Oceanography; Chemical Oceanography; Data Reduction; Editing and Special Input/Output; Geoscience; Graphical Display; Applied Mathematics; Navigation and Charting; Physical Oceanography; and Retrieval of Ocean Data. An index by agency or institution furnishing the abstract, an index by programming language, and an index by computer make and model are also included. Many of the programs are on file at NODC, and information can be obtained from the Director, National Oceanographic Data Center, Washington DC 20390. Presumably copies of the catalog can also be purchased from the Director, although nothing indicates where one should send the $1.35 they charge per copy. The catalog is Publication C-5 (second revision), issued in 1970.--James A. Peters.

AVAILABLE PROGRAMS

WILCOX--Runs the Wilcoxon two-sample test (also known as the Mann-Whitney U-test), when one observation has been made on each element in two random samples. Results include the sum of the ranks in both samples, the number of observations in each sample, the test statistic "S", and the number of ties between observations in different samples. Program also lists all observations in ranked order, if desired. In BASIC language, written by and available from James A. Peters, Division of Reptiles, Smithsonian Institution, Washington DC 20560, as paper tape for time-shared computers.

TRANSLATIONS OF COMPUTER USE PAPERS IN RUSSIAN

The following series of papers on computer use in geological studies has been translated from "Institut Neftekhimicheskoi i Gazovoi Promyshlemnosti; Trudy," no. 62, where all appear under the general title "Overall Interpretation of Complex Geological and Geophysical Data by Means of Computers." The translations are available from the National Translations Center, John Crerar Library, 35 West 33rd St, Chicago IL 60616, although you probably cannot afford them!--JAP.

Part I. Use of learning programs in solving geological problems. S. V. Guberman, pp. 3-14.
Part II. General approach to the problem of pattern recognition. V. Loginov & Y. I. Khurgin, pp. 15-20.
Part III. Application of the "Kora-3" program on the "Strela" Computer. I. N. Nyuberg & M. I. Ovchinnikova, pp. 21-24.
Part IV. Application of a "generalized portrait" algorithm on the "Ral-2" electronic computer. I. M. Churinova & G. A. Gorvits, pp. 25-30.
Part V. Evaluation of the effectiveness of geophysical prospecting in detecting productive strata. K. N. Milovidov, pp. 31-36.
Part VI. Analysis of the effectiveness of various recognition programs in the solution of geological problems. S. A. Guberman, M. L. Izvekova, & I. M. Churinova, pp. 37-41.
Part VIII. Differentiation of oil-bearing and water-bearing strata in the carbonate deposits of Orenburgskaya Oblast (Orenburg Province) by means of the "Kora-3" and "Generalized Portrait" programs. S. A. Guberman & O. I. Ryabykh, pp. 47-52.

ECOLOGICAL MODELING

The Oak Ridge National Laboratory has just issued a 97 page contribution to the analysis of ecosystems section of the IBP project on the Deciduous Forest Biome, entitled "A Preliminary Bibliography of Mathematical Modeling in Ecology," compiled by R. V. O'Neill, J. M. Hett, and N. F. Sollins. According to the introduction (p. 1), "The techniques of mathematical modeling are expected to play a major role in the synthesis of data from the Deciduous Forest Biome Project. This bibliography was produced to assist the Biome analysts by making references to published models available... It is hoped that much duplication of effort can be avoided in this manner." (Now there's an old MUDPIE objective, if I ever saw one.)

The citations given have been incorporated into the bibliographic retrieval system of the Biogeochemical Information Center at the Oak Ridge National Laboratory, which will be developed as a more extensive computerized bibliography. The volume, identified as "ORNL-IBP-70-3, International Biological Program UC-48-

Biology and Medicine," is available from the Clearing House, U.S.Dept of Commerce, Springfield, VA 22151, for $3.00 for a printed copy or $.65 for microfiche. If interested, you might try Oak Ridge first to see if there are a few distribution copies left.--JAP.

RECENT LITERATURE

Foote, R. H. New directions for commitment. Journal of the Washington Academy of Science, vol. 60, 1970: 136-140.

Harbaugh, J. W., & G. Bonham-Carter. Computer Simulation in Geology. Wiley-Interscience, New York, 1970: xiv + 575.

Johnson, J. G. A quantitative approach to faunal province analysis. American Journal of Science, vol. 270, 1971: 257-280.

Negrete, J., W. Giloi, & J. Encarnacao. The application of computer graphics to automate medical interviews. Memoria de la Conferencia Internacional sobre Sistemas, Redes y Computadoras, IEEE, Mexico, 1971, vol. 3: 1047-1048.

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